CLAIMS

What is claimed is:

1. A method of caching and rendering an image comprising:

    providing a raw image to render;

    preprocessing said raw image to produce a plurality of tiles;

    determining a starting view, said starting view being a portion of said raw

image and comprising a first set of tiles;

    loading said first set of said tiles into memory;

    displaying said starting view using said first set of tiles;

    providing a weighting method that determines a weight for tiles;

    applying said weight to each of said tiles based on said weighting

method;

    providing a first analysis method capable of analyzing said weight of

each of said tiles to identify tiles that are not in said memory;

    identifying at least one tile that is not in said memory using said analysis

method; and

    loading said at least one tile into said memory.

2. The method of claim 1 wherein said weighting method comprises:

    for each displayed tile, incrementing said weight; and

    for each non-displayed tile with a weight greater than zero, subtracting a

value greater than or equal to zero from said weight.

3. The method of claim 1 further comprising:

    providing a second analysis method capable of analyzing said weight of

each of said tiles in said memory to identify tiles that have a weight below a

predetermined level; and

    removing said tiles that have a weight below said predetermined level

from memory.

4. The method of claim 1 further comprising:

    determining a second view, said second view comprising a third set of

tiles;

determining that a portion of said third set of tiles are in said memory and
at least one of said tiles in said third set of tiles is not in memory;

displaying said portion of said third set of tiles that are in said memory;

loading said at least one of said tiles in said third set of tiles that is not in
memory into memory as a new tile; and

displaying said new tile.

5. The method of claim 1 wherein said raw image is a vector image.

6. The method of claim 1 wherein said raw image is a raster image.

7. A method of caching and rendering a raw image comprising:

receiving a raw image to render, said raw image comprising a plurality of
vectors;

determining a starting view to display, said starting view being a portion
of said raw image;

determining a cache space that is a superset of said starting view;

determining a first set of intersecting vectors that intersect said cache
space;

trimming at least one of said vectors in said first set of vectors to
approximately the limits of said cache space;

storing said intersecting vectors in a cache;

rendering said starting view by displaying said first set of intersecting
vectors from said cache;

receiving a first command from a user to change the view to a second
view;

determining if said second view is completely within said cache space;

if at least a portion of said second view is within said cache space,
rendering said second view using at least a portion of said intersecting vectors
stored in said cache; and

if at least a portion of said second view is outside of said cache space,
determining additional intersecting vectors that intersect said second view and
rendering said second view using at least a portion of said additional
intersecting vectors.

8. The method of claim 7 further comprising:

    determining a new position for said cache space;

    determining a second set of intersecting vectors that intersect said new position of said cache space;

5   trimming at least one of said vectors to approximately the limits of said cache space; and

    storing said second set of intersecting vectors in said cache.

9. The method of claim 8 wherein said determining a new position for said cache space comprises:

    analyzing the distance between cache space and said second view; and

    if said distance is below a predetermined value, moving said cache space.

10. The method of claim 9 wherein said moving said cache space comprises centering said cache space with respect to said second view.

11. The method of claim 7 wherein said raw image further comprises a raster image.

12. A system for caching and rendering an image comprising:

    a first computer system adapted to preprocess said image to produce a plurality of tiles;

    a second computer system adapted to determine a starting view, said

5   starting view being a portion of said raw image and comprising a first set of tiles, load said first set of said tiles into memory, display said starting view using said first set of tiles, apply a weight to each of said tiles based on a weighting method, identify at least one tile that is not in said memory using an analysis method, and load said at least one tile into said memory.

13. The system of claim 12 wherein said weighting method comprises:

    for each displayed tile, incrementing said weight; and

    for each non-displayed tile with a weight greater than zero, subtracting a value greater than or equal to zero from said weight.

14. The system of claim 12 wherein said second computer system is further adapted to identify tiles that have a weight below a predetermined level, and

remove said tiles that have a weight below said predetermined level from memory.

15. The system of claim 12 wherein said second computer system is further adapted to determine a second view, said second view comprising a third set of tiles, determine that a portion of said third set of tiles are in said memory and at least one of said tiles in said third set of tiles is not in memory, display said portion of said third set of tiles that are in said memory, load said at least one of said tiles in said third set of tiles that is not in memory into memory as a new tile, and display said new tile.

16. The system of claim 12 wherein said raw image is a vector image.

17. The system of claim 12 wherein said raw image is a raster image.

18. A system for caching and rendering a raw image comprising:

a first computer system adapted to receive a raw image to render, said raw image comprising a plurality of vectors, determine a starting view to display, said starting view being a portion of said raw image, determine a cache space that is a superset of said starting view, determine a first set of intersecting vectors that intersect said cache space, trim at least one of said vectors in said first set of vectors to approximately the limits of said cache space, and store said intersecting vectors in a cache;

a second computer system adapted to render said starting view by displaying said first set of intersecting vectors from said cache, receive a first command from a user to change the view to a second view, determine if said second view is completely within said cache space, if at least a portion of said second view is within said cache space, render said second view using at least a portion of said intersecting vectors stored in said cache, and if at least a portion of said second view is outside of said cache space, determine additional intersecting vectors that intersect said second view and rendering said second view using at least a portion of said additional intersecting vectors;

19. The system of claim 18 wherein said first computer system is further adapted to determine a new position for said cache space, determine a second set of

intersecting vectors that intersect said new position of said cache space, trim at least one of said vectors to approximately the limits of said cache space, and store

5 said second set of intersecting vectors in said cache.

20. The system of claim 19 wherein said second computer system is further adapted to analyze the distance between cache space and said second view, and if said distance is below a predetermined value, move said cache space.

21. The method of claim 18 wherein said raw image further comprises a raster image.